

CLAIMS

What is claimed is:

- 1 1. A method of downloading code to at least one remote unit on a network having a plurality of
2 remote units wherein there are a plurality of data paths for transmitting code to each remote
3 unit, comprising the steps of:
 - 4 a) selecting one of the plurality of data paths based on the code to be transmitted; and
 - b) transmitting the code to the at least one remote unit on the selected data path.
- 2 2. The method of downloading code to at least one remote unit of claim 1, wherein the units are set top boxes.
- 3 3. The method of downloading code to at least one remote unit of claim 1, wherein the code is software code used to update the software running on the at least one unit.
- 1 4. The method of downloading code to at least one remote unit of claim 3, wherein at least one
2 path of the plurality of paths has a different data rate loss than the other paths of the plurality
3 of data paths.
- 1 5. The method of downloading code to at least one remote unit of claim 4, wherein step a)
2 comprises selecting one of the plurality of data paths based on the code to be transmitted and
3 the data rate loss of the path.

1 6. The method of downloading code to at least one remote unit of claim 4, wherein step a)
2 comprises selecting one of the plurality of data paths having the lowest data rate loss.

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1 7. The method of downloading code to at least one remote unit of claim 4, wherein step a)
2 comprises selecting one of the plurality of data paths having the lowest data rate loss when
3 the code represents critical software for the at least one unit.

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1 8. The method of downloading code to at least one remote unit of claim 4, wherein step a)
2 comprises selecting one of the plurality of data paths having the lowest data rate loss where
3 the code represents critical software stored in non-erasable memory of the at least one unit.

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1 11. The method of downloading code to at least one remote unit of claim 1, wherein step b)
2 comprises the steps of:
3 a) separating the code into a plurality of modules;
4 b) transmitting a descriptor file to the plurality of units that indicates at least one remote unit
5 is to receive the code and the code is separated into a plurality of modules; and
6 c) transmitting the plurality of modules to the plurality of remote units.

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2 12. The method of downloading code to at least one remote unit of claim 11, further comprising
3 the steps of:
4 a) each remote unit receiving the descriptor file; and
5 b) each remote unit retrieving the modules identified by the descriptor file when the
6 descriptor file indicates the remote unit is to receive the modules.

1 13. The method of downloading code to at least one remote unit of claim 11, further comprising
2 the steps of:
3 a) each remote unit receiving the descriptor file; and
4 b) each remote unit retrieving the modules identified by the descriptor file and assembling
5 the modules into the code when the descriptor file indicates the remote unit is to receive
6 the modules.

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1 14. The method of downloading code to at least one remote unit of claim 11, further comprising
2 the steps of:
3 a) each remote unit receiving the descriptor file; and
4 b) each remote unit retrieving the modules identified by the descriptor file, assembling the
5 modules into the code, and installing the code when the descriptor file indicates the
6 remote unit is to receive the modules.

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2 15. An article of manufacture for use in downloading code to at least one remote unit on a
3 network having a plurality of remote units wherein there are a plurality of data paths for
4 transmitting code to each remote unit, the article of manufacture comprising computer
5 readable storage media including program logic embedded therein that causes control
6 circuitry to perform the steps of:
7 a) selecting one of the plurality of data paths based on the code to be transmitted; and
b) transmitting the code to the at least one remote unit on the selected data path.

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2 16. The article of manufacture for use in downloading code to at least one remote unit of claim
3 15, wherein the units are set top boxes.

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2 17. The article of manufacture for use in downloading code to at least one remote unit of claim
3 15, wherein the code is software code used to update the software running on the at least one
unit.

1 18. The article of manufacture for use in downloading code to at least one remote unit of claim
2 17, wherein at least one path of the plurality of paths has a different data rate loss than the
3 other paths of the plurality of data paths.

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1 19. The article of manufacture for use in downloading code to at least one remote unit of claim
2 18, wherein step a) comprises selecting one of the plurality of data paths based on the code to
3 be transmitted and the data rate loss of the path.

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20. The article of manufacture for use in downloading code to at least one remote unit of claim
18, wherein step a) comprises selecting one of the plurality of data paths having the lowest
data rate loss.

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21. The article of manufacture for use in downloading code to at least one remote unit of claim
18, wherein step a) comprises selecting one of the plurality of data paths having the lowest
data rate loss when the code represents critical software for the at least one unit.

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1 22. The article of manufacture for use in downloading code to at least one remote unit of claim
2 18, wherein step a) comprises selecting one of the plurality of data paths having the lowest
3 data rate loss where the code represents critical software stored in non-erasable memory of
4 the at least one unit.

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1 23. The article of manufacture for use in downloading code to at least one remote unit of claim
2 15, wherein step b) comprises transmitting the code to the plurality of remote units in a
3 descriptor file that indicates the at least one remote unit is recipient of the code.

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1 24. The article of manufacture for use in downloading code to at least one remote unit of claim
2 22, wherein step b) comprises the steps of:
3 a) transmitting a descriptor file to the plurality of units that indicates at least one remote unit
4 is to receive the code; and
5 b) transmitting the code to all remote units.

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1 25. The article of manufacture for use in downloading code to at least one remote unit of claim
2 15, wherein step b) comprises the steps of:
3 a) separating the code into a plurality of modules;
4 b) transmitting a descriptor file to the plurality of units that indicates at least one remote unit
5 is to receive the code and the code is separated into a plurality of modules; and
6 c) transmitting the plurality of modules to the plurality of remote units.

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1 26. The article of manufacture for use in downloading code to at least one remote unit of claim
2 25, further comprising the steps of:
3 a) each remote unit receiving the descriptor file; and
4 b) each remote unit retrieving the modules identified by the descriptor file when the
5 descriptor file indicates the remote unit is to receive the modules.

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1 27. The article of manufacture for use in downloading code to at least one remote unit of claim
2 25, further comprising the steps of:
3 a) each remote unit receiving the descriptor file; and
4 b) each remote unit retrieving the modules identified by the descriptor file and assembling
5 the modules into the code when the descriptor file indicates the remote unit is to receive
6 the modules.

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28. The article of manufacture for use in downloading code to at least one remote unit of claim
25, further comprising the steps of:
a) each remote unit receiving the descriptor file; and
b) each remote unit retrieving the modules identified by the descriptor file, assembling the
modules into the code, and installing the code when the descriptor file indicates the
remote unit is to receive the modules.

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1 29. An apparatus for downloading code to at least one remote unit on a network having a
2 plurality of remote units wherein there are a plurality of data paths for transmitting code to
3 each remote unit, comprising:
4 a) means for selecting one of the plurality of data paths based on the code to be transmitted;
5 and
6 b) means for transmitting the code to the at least one remote unit on the selected data path.

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1 30. The apparatus for downloading code to at least one remote unit of claim 29, wherein the units
2 are set top boxes.

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1 31. The apparatus for downloading code to at least one remote unit of claim 29, wherein the code
2 is software code used to update the software running on the at least one unit.

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1 32. The apparatus for downloading code to at least one remote unit of claim 31, wherein at least
2 one path of the plurality of paths has a different data rate loss than the other paths of the
3 plurality of data paths.

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33. The apparatus for downloading code to at least one remote unit of claim 32, wherein the means for selecting comprises means for selecting one of the plurality of data paths based on the code to be transmitted and the data rate loss of the path.

34. The apparatus for downloading code to at least one remote unit of claim 32, wherein the
means for selecting comprises means for selecting one of the plurality of data paths having
the lowest data rate loss.

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1 35. The apparatus for downloading code to at least one remote unit of claim 32, wherein the
2 means for selecting comprises means for selecting one of the plurality of data paths having
3 the lowest data rate loss when the code represents critical software for the at least one unit.

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1 36. The apparatus for downloading code to at least one remote unit of claim 32, wherein the
2 means for selecting comprises means for selecting one of the plurality of data paths having
3 the lowest data rate loss where the code represents critical software stored in non-erasable
4 memory of the at least one unit.

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1 37. The apparatus for downloading code to at least one remote unit of claim 29, wherein the
2 means for transmitting comprises means for transmitting the code to the plurality of remote
3 units in a descriptor file that indicates the at least one remote unit is recipient of the code.

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1 38. The apparatus for downloading code to at least one remote unit of claim 36, wherein the
2 means for transmitting comprises:

3 a) means for transmitting a descriptor file to the plurality of units that indicates at least one
4 remote unit is to receive the code; and
5 b) means for transmitting the code to all remote units.

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39. The apparatus for downloading code to at least one remote unit of claim 29, wherein the
4 means for transmitting comprises:

5 a) means for separating the code into a plurality of modules;
6 b) means for transmitting a descriptor file to the plurality of units that indicates at least one
7 remote unit is to receive the code and the code is separated into a plurality of modules;
1 and
1 c) means for transmitting the plurality of modules to the plurality of remote units.